

REMARKS

The Office Action of March 31, 2008 was received and carefully reviewed. Reconsideration and withdrawal of the currently pending rejections are requested for the reasons advanced in detail below.

Claims 1, 3, 5-15, 17-24, 27, 28 and 31-37 were pending prior to the instant amendment. By this amendment, claims 1, 3, 13, 14, and 15 are amended; and claims 35-37 are canceled. Thus, claims 1, 3, 5-15, 17-24, 27-28 and 31-34 are currently pending in the instant application of which claims 7-12 and 19-24 are withdrawn.

Claims 1, 3, 5-6, 13-15, 17-18, 27-28, and 31-32, were rejected under 35 U.S.C. § 102(e) as being unpatentable over Yamazaki et al. (U.S. Patent No. 7,176,069). Yamazaki et al., however, fails to render the claimed invention unpatentable. Each of the claims recite a specific combination of features that distinguishes the invention from the prior art in different ways. For example, independent claims 1 and 3 recite a combination that includes, among other things:

“etching the wiring using an atmospheric-pressure plasma device having a linear plasma generator using the resist mask as a mask by generating plasma between a first electrode of the linear plasma generator and a second electrode surrounding the first electrode of the linear plasma generator, wherein at least the first electrode has a sheet-like shape.”

Independent claim 13 recites yet another combination that includes, inter alia,

“etching the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged plasma generators using the resist mask as a mask by generating plasma between a first electrode of the linear plasma generator and a second electrode surrounding the first electrode of each of the plurality of linearly-arranged plasma generators, wherein each of the first solution ejector and the second solution ejector has three ejection ports forming a triangle.”

Additionally, independent claims 14-15 recite another combination that includes, for example,

“etching the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged plasma generators using the resist mask as a mask by generating plasma between a first electrode of the linear plasma generator and a second electrode surrounding the first electrode of each of the plurality of linearly-arranged plasma generators, wherein each of the first solution ejector and the second solution ejector has three ejection ports forming a triangle.”

The feature including “wherein the first solution ejector and the second solution ejector has three ejection ports forming a triangle,” was previously recited in dependent claims 35-37. Support for the features including etching the wiring using an atmospheric-pressure plasma device having a linear plasma generator (a plurality of linearly-arranged plasma generators) using the resist mask as a mask by generating plasma between a first electrode of the linear plasma generator and a second electrode surrounding the first electrode of the linear plasma generator (each of the plurality of linearly-arranged plasma generators), as recited in amended claims 1, 3 and 13-15, is found, at least, in the ninth embodiment of Applicant’s originally filed specification, for example, on page 24, lines 25-26. Additionally, support for amended claim language including “wherein at least the first electrode has a sheet-like shape,” as recited in claims 1 and 3 is found, at least, in FIGS. 12(A)-12 (D).

Yamazaki et al. provides a technique to manufacture a display device, applying a means to form a pattern such as a contact hole formed in a semiconductor, film, a wiring or an insulating film, or a mask pattern to form such a pattern by drawing directly, a means to remove a film, such as etching and ashing, and a film forming means to selectively form an insulating film, a semiconductor film and a metal film on

a predetermined region. However, at the very least, Yamazaki et al. fails to disclose or suggest any of these exemplary features recited in the independent claims 1, 3 and 13-15, for example, as outlined above.

For anticipation under 35 U.S.C. § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present (M.P.E.P. 706.02). Since each and every element, as set forth in the claims are not found either expressly or inherently described as required by the M.P.E.P., Yamazaki et al. cannot be said to anticipate the invention as claimed. Hence, withdrawal of the rejection is respectfully requested.

Each of the dependent claims depend from one of independent claims 1, 13, 14, or 15 and are patentable over the cited prior art for at least the same reasons as set forth above with respect to claims 1, 13, 14, and 15.

In addition, each of the dependent claims also recite combinations that are separately patentable.

Claims 1, 3, 5-6, 13-15, 17-18, 27-28, and 31-37 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa (U.S. Patent Publication No. 2003/0132987) in view of Tsutsui (U.S. Patent Publication No. 2001/0027013) and further in view of Mori et al. (JP Patent No. 2000/169977). Ogawa, Tsutsui and Mori et al., however, fail to render the claimed invention unpatentable. Each of the independent claims recite a specific combination of features, for example, as listed above, that distinguishes the invention from the prior art in different ways. At the very least, the applied references, whether taken alone or in combination, fail to disclose or suggest any of these exemplary features recited in independent claims 1, 3 and 13-15.

The Examiner has failed to establish a *prima facie* case of obviousness for at least four reasons. First, the Examiner has not demonstrated how Ogawa, Tsutsui and Mori et al., whether taken alone or in combination, disclose or suggest each and every feature recited in the claims. *See* M.P.E.P. § 2143 (7th ed. 1998). Second, the Examiner has not shown the existence of any reasonable probability of success in modifying Ogawa, the base reference, based on the teachings of Tsutsui and Mori et al., the secondary references, in a manner that could somehow result in the claimed invention. *See id.* Third, the Examiner has not identified any suggestion or motivation, either in the teachings of the applied references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the apparatus of Ogawa, in a manner that could somehow result in the claimed invention. *See id.* Finally, the Examiner has not explained how his obviousness rationale could be found in the prior art — rather than being a hindsight reconstruction of Applicants' own disclosure. *See id.*

Each of the Examiner's factual conclusions must be supported by "substantial evidence" in the documentary record, as required by the Federal Circuit. *See In re Lee*, 61 U.S.P.Q.2d 1430, 1435 (Fed. Cir. 2002). The Examiner has the burden of documenting all findings of fact necessary to support a conclusion of anticipation or obviousness "less the 'haze of so-called expertise' acquire insulation from accountability." *Id.* To satisfy this burden, the Examiner must specifically identify where support is found within the prior art to meet the requirements of 35 U.S.C. §§ 102(b) and 103. In this case, however, the Examiner has failed to satisfy his burden of demonstrating how Ogawa, taken alone or in combination with Tsutsui and Mori et al.

can either anticipate or render obvious each and every one of the limitations present in independent claims 1, 3 and 13-15, as required by the M.P.E.P. and Federal Circuit jurisprudence.

Turning to the Office Action rejection, the examiner readily admits that Ogawa “does not clearly teach forming the resist mask layer by using solution ejector, etching the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged plasma generators, and etching the wiring layer at the atmospheric pressure or near-atmospheric pressure.” To cure the deficiencies of Ogawa, the Examiner turns to the disclosure of Mori et al. Specifically, the Examiner states that “Mori et al. teaches etching the wiring (metal layer) by using high frequency plasma under atmospheric pressure (see abstract, meeting claims 1, 3, 5, 13-15, 18).”

Mori et al. discloses etching the wiring using an atmospheric-pressure plasma device having a nozzle 14, a high frequency electrode 18, and a ground electrode 20. A mixed gas is fed to the nozzle 14; a barrier discharge is generated on the space between the high frequency electrode 18 and the ground electrode 20; and a gaseous mixture of the gaseous helium and gaseous oxygen or the like is separated in a discharge part 46 to generate plasma. As disclosed in the abstract of Mori et al, “[w]hen plasma generated by this microstreamer discharge is applied, even metal [a]nd ceramic can be subjected to etching.”

On the other hand, the present invention includes etching the wiring using an atmospheric-pressure plasma device having a linear plasma generator (a plurality of linearly-arranged plasma generators) using the resist mask as a mask by generating plasma between a first electrode of the linear plasma generator and a second electrode

surrounding the first electrode of the linear plasma generator (each of the plurality of linearly-arranged plasma generators). Mori et al fails to disclose or fairly suggest at least the aforementioned features. The disclosure of Tsutsui also fails to disclose the aforementioned features and, hence, does not cure the deficiencies of Ogawa.

In accordance with the M.P.E.P. § 2143.03, to establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 196 (CCPA 1970). Therefore, it is respectfully submitted that neither Ogawa, Tsutsui and Mori et al., taken alone or in any proper combination, discloses or suggests the subject matter as recited in claims 1, 3 and 13-15. Hence, withdrawal of the rejection is respectfully requested.

Each of the dependent claims depend from one of independent claims 1, 3 or 13-15 and are patentable over the cited prior art for at least the same reasons as set forth above with respect to claims 1, 3 and 13-15.

In addition, each of the dependent claims also recite combinations that are separately patentable.

Claims 1, 3, 5-6, 13-15, 17-18, 27-28, and 31-32 were provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims of co-pending Application No.. 10/771,421; 10/771,277, and 10/772,419. Applicant respectfully requests that these rejections be held in abeyance until otherwise allowable claims are designated in the instant application.

In view of the foregoing remarks, this claimed invention, as amended, is not rendered obvious in view of the prior art references cited against this application. Applicant therefore request the entry of this response, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Should the Examiner believe that a telephone conference would expedite issuance of the application, the Examiner is respectfully invited to telephone the undersigned patent agent at (202) 585-8316.

Respectfully submitted,

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